

An annotated list of the Orthoptera (Insecta) species described by Adolf Nadig with an account of the type material housed in the Muséum d'histoire naturelle de Genève

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An annotated list of the Orthoptera (Insecta) species described by Adolf Nadig with an account of the type material housed in the Muséum d'histoire naturelle de Genève. - Adolf Nadig was an amateur entomologist who accumulated an important collection of Orthoptera and described 32 species or subspecies, principally from the southern slopes of the Alps and from North Africa. He left his collection to the Muséum d'histoire naturelle de Genève, where it is kept as a separate collection under the terms of the gift. The names of his taxa are listed alphabetically, the sex, verbatim label data and condition of the primary type specimens is given, along with their location within the collection.

Keywords: Ensifera - Caelifera - Insubric region - Mahgreb - type catalogue.

INTRODUCTION

Adolf Nadig (1910-2003) was a Swiss entomologist specialising in the Orthoptera. Born in Chur in the canton of Graubünden, Nadig was the son of a well-known naturalist of the same name who specialised in Hymenoptera and Orthoptera, and some of Nadig's early scientific contributions were joint publications with his father. The younger Nadig studied biology at Zürich University and then became a teacher, working first in Zürich, then in Chur and later in Zuoz. He also had a distinguished military career, and was involved in a project researching the environmental effects of the hydro-electric dams that were built in the Lower Engadine Valley, in Graubünden (Hauser, 2004). In his free time Nadig was an indefatigable entomologist, amassing a formidable collection of Orthoptera from Europe, particularly the Insubric region of the southern slopes of the Alps, and North Africa. After his retirement and return to Chur in 1975 he was able to devote more time to entomology and most of his Orthoptera publications appeared after this (Detzel & Coray, 2004). Nadig described thirty two species or sub-species of Orthoptera.

Nadig's collection came to the MHNG in 2001 (Schwendinger & Lienhard, 2001), and under the terms of the legacy is kept as a separate collection. A list of the taxa described by Nadig is given by Coray (2004), who gives the type locality and the kind of type, but does not treat the condition of the primary types or enumerate the holdings of secondary types. Nadig described a number of taxa as forms or varieties

rather than subspecies; these names, which are listed by Coray (2004), are unavailable under articles 45.5 and 45.6.3 of the International Code of Zoological Nomenclature (1999).

ARRANGEMENT AND FORMAT

The species are listed alphabetically. The format for each is:

specific epithet Author, publication: page [*Original generic placement*].

Provenance as given in the original description. Number and kind of type specimens.

Specimen: "Label data" [format of label]. Following the recommendations of Ohl & Oswald (2004) the condition of primary type specimens is noted. Other comments.

Location of material in the MHNG Nadig collection.

Currently valid combination following *Orthoptera Species File* (Eades *et al.*, 2014).

Abbreviations used in the list:

ISCM Institut Scientifique Chérifien, now Institut Scientifique de l'Université Mohammed V, Rabat, Morocco

MCSN Museo Civico di Storia Naturale "Giacomo Doria", Genoa, Italy

MHNG Muséum d'histoire naturelle, Genève, Switzerland

OSF *Orthoptera Species File Online* (Eades *et al.*, 2014)

RMNH Naturalis Biodiversity Center, Leiden, The Netherlands

SMTD Museum für Tierkunde, Dresden, Germany

CATALOGUE

alhoceimae Nadig, 1994: 982-984 [Uromenus].

Marokko, Cala Iris. ♂ Holotype, 15 ♂ paratypes and 8 ♀ paratypes.

♂ Holotype with labels: "Maroc 68 MA 68: 32, Cala Iris, 0-15 m, 28.6.68, leg. Nadig" [printed on white card]; "U. alhoceimae sp. n. ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" handwritten]. Most of both antennae and the claws of the left hind leg are missing. Dissected genitalia are glued to a card mount secured on the original pin. The 15 ♂ paratypes are also present. There are 10 ♀ specimens labelled as paratypes (one as allotype) including four from the type locality for which Nadig only mentions two in the original description. It is not clear whether the number in the description is erroneous or whether two specimens were identified later and thus are not really part of the type series. Images on OSF. Box Nadig 250.

A junior synonym of *Uromenus pardoi* (Morales-Agacino, 1950)

alpinus italoaustriacus Nadig, 1987: 315 [*Anonconotus*].

S-Tirol, Strickberg über Innichen. ♂ Holotype, 4 ♂ paratypes and 2 ♀ paratypes.

♂ Holotype with labels: "I: S-Tirol 82: 144 Pustertal: Strickb. ü. Innichen, 2050-2150m, 3.9.82, leg. NADIG" [printed on white card]; "Anonc. alpinus (Yers.) italoaustriacus ssp. n. ♂ ~~det.~~ Nadig" [printed on white card with "italoaustriacus ssp. n. ♂" handwritten by Nadig]; "82: 144 No.2 (♂) Mikroph. Elytra + Zeichn. Titill."

[typed on yellow paper with “♂” added by hand]; “Holo-Typus” [printed on red card with “Holo-” handwritten]. The right antenna is missing. Dissected genitalia are glued to a card mount secured on the original pin. There are three ♂ paratypes and two ♀ paratypes. Images on OSF. Box Nadig 185.

Anonconotus italoaustriacus Nadig, 1987

annamariae Nadig, 1985: 329-333 [*Eupholidoptera*].

Kreta, N. Lasithiou, Kato Zakros. ♂ Holotype, 11 ♂ paratypes and 14 ♀ paratypes.

♂ Holotype with labels: “GRIE., KRETA 84:14 Nom. Lasithiou: Kato Zakros, 50 m, 14.6.84, leg. NADIG” [printed on white card]; “GRIE 84:14 No 1 (♂)” [handwritten on whitish paper]; “Eu. *annamariae* sp. n. NADIG, 1985 ♂ det. NADIG” [typed on white card with “♂” added by hand and “det. NADIG” printed]; “HOLO-Typus” [printed on red card with “HOLO-” typed]. The claws of the left hind leg are missing. Dissected genitalia are glued to a card mount secured on the original pin. 10 ♂ paratypes and 13 ♀ paratypes, one labelled as allotype, are also present. According to the original description a pair of paratypes was deposited in the collection of Fer Willemse, which is now in the RMNH. Box Nadig 170.

Eupholidoptera annamariae Nadig, 1985

antaliae Nadig, 1991: 127-131 [*Parapholodoptera*].

Türkei, Kap Anamur. ♂ Holotype, 1 ♂ paratype and 6 ♀ paratypes.

♂ Holotype with labels: “TR: S-Küste TR.88: 19, Anamur 1-50 m, 1.7.88 und 6.7.88, leg. Nadig” [printed on white card]; “Paraphol. *Antalae* [sic] sp. n. NADIG, 1991 ♂ det. Nadig” [typed on white card with “♂” added by hand and “det. Nadig” printed]; “HOLO-Typus” [printed on red card with “HOLO-” typed]. Most of both antennae, the claws of the left hind leg and the entire right hind leg are missing. Dissected genitalia are glued to a card mount secured on the original pin. One ♂ and six ♀ paratypes, one labelled as allotype, are also present, as are the two other ♀ specimens mentioned in the original publication but not designated as paratypes. Images on OSF. Box Nadig 173.

Parapholodoptera antaliae Nadig, 1991

azami minor Nadig, 1961: 286-290 [*Roeseliana*].

Piano Scairolo (TI). ♂ Holotype, 122 ♂ paratypes and 136 ♀ paratypes.

♂ Holotype with labels: “Piano Scairolo, 16.VII.60 TI. Mäh-Sumpfwiesen 280 m leg Nadig” [handwritten by Nadig on white card with “Nadig” printed]; “Type” [printed in red on white card with red printed border]; “Holotypus of *R. azami minor* Nadig 1961” [handwritten on red paper]. The claws of the right front leg and the last tarsal segment of the left front and middle legs are lost. The paratypes from the type locality are labelled as such but the others are not; there are 95 ♂ and 121 ♀ from the other localities mentioned in the original description, as well as numerous immature specimens. A pair of paratypes from the type locality is in the SMTD (images on OSF). Images on OSF. Boxes Nadig 135 & 136.

Roeseliana fedtschenkoi minor Nadig, 1961

baracunensis Nadig, 1987: 317 [*Anonconotus*].

Italien, Piemonte, Cle. Baracun. ♂ Holotype, 7 ♂ paratypes and 4 ♀ paratypes.

♂ Holotype with labels: "I. PIEMONTE: 85:54 V. Carboneri unt. Cle. Baracun, 2020 m, 30.8.85, leg. NADIG" [printed on white card]; "85 : 54 No. 1 (♂) Zeichn. Titill. aufgeklebt oben" [typed on yellow paper with "♂" added by hand]; "A. baracunensis n. sp. NADIG ♂ det. NADIG" [typed on white card with "♂" added by hand and "det. NADIG" printed]; "Holo-Typus" [printed on red card with "Holo-" typed]. The right antenna is missing. Dissected genitalia are glued to a card mount with a sketch of the titillator on it secured on the original pin. There are seven ♂ paratypes and four ♀ paratypes, one labelled as allotype, also present. Images on OSF. Box Nadig 189.

Anonconotus baracunensis baracunensis Nadig, 1987

biguttulus marocanus Nadig, 1976b: 652-661 [*Chorthippus*].

Maroc, J. el Arz. ♂ Holotype and 1 ♀ paratype.

♂ Holotype with labels: "MAROC 70 MA 70: 73 Rif: J. el Arz (S.J. Tidirhine), 1700-1800 m, SE-Hang, 12.7.70, leg. Nadig" [printed on white card with "73" and "1700-1800 m SE-Hang" handwritten by Nadig]; "Photo, Mikro, Mio 71: II, ~~40-45~~ 15-25" [handwritten on white card with "15-25" in red]; "Chor. biguttulus (L.) maroc. Nad. ♂ det. Nadig" [printed on white card with "maroc. Nad. ♂" handwritten]; "HOLO-Typus Typus" [printed on red card with "Holo-" typed]. Specimen set with right wings spread and left wings folded. The tibia and tarsi of the right front leg and the last tarsal segment of both middle legs are lost. The right hind leg is glued to a card mount secured on the original pin. There is a ♀ specimen labelled as allotype present. A label in the insect box states that all of the specimens with the same locality data (MA 70: 73), and with sample number MA 70: 74 are paratypes, but this is not mentioned in the original description and the individual specimens are not labelled as such. Box Nadig 818.

Chorthippus marocanus Nadig, 1976

bouiblani Nadig, 1995: 150-155 [*Steropleurus*].

Maroc, Dj. Bou Iblane. ♂ Holotype, 21 ♂ paratypes, 11 ♀ paratypes and 2 immature paratypes.

♂ Holotype with labels: "MAROC 70 MA 70: 85, Moyen Atlas Nord-Est, J. Bou Iblane, 2000-2500m, S-Hang, 17./18.7.70, leg. Nadig" [printed on white card with "85" and "2000-2500m S-Hang" handwritten by Nadig]; "MA 70 : 85 No. 1" [typed on a strip of white paper]; "S. bouiblani NADIG, 1995 ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" handwritten]. The right hind leg lacks two tarsal segments. There are dissected parts glued to a card mount secured on the original pin. The 21 ♂ paratypes and two immature paratypes are also present. There are 14 ♀ specimens labelled as paratypes (one as allotype), all with the same data as the holotype; it is not clear whether these were all used by Nadig for the description, in which case the number of paratypes cited in the original description is erroneous, or whether three of the specimens were identified later and are thus not really paratypes. Images on OSF. Box Nadig 259.

Uromenus bouiblani (Nadig, 1995)

choumarae Nadig, A. 1976a: 344 [*Uromenus*].

Maroc, Haut-Atlas, Tizi-n-Test. ♂ Holotype, 1 ♂ paratype and 2 ♀ paratypes.

One ♂ paratype and one ♀ paratype. In the original description it is stated that the holotype and the other ♀ paratype (referred to as the allotype) are in the collection of the ISCM. Box Nadig 262.

Uromenus choumarae Nadig, 1976

cialancensis Nadig, 1986: 218-222 [*Chorthippus*].

Italien, 13-Laghi-Pta. Cialancia. ♂ Holotype, 17 ♂ paratypes and 24 ♀ paratypes.

♂ Holotype with labels: "I: Piemonte: 85: 52 13 Laghi - Pta. Cialancia, 2520-2750 m, 29.8.85, leg. NADIG" [printed on white card]; "Genit. extrah." [typed on a strip of white paper]; "85 : 52 No. 1 (♂) Messungen" [typed on a strip of yellow paper with "♂" added by hand]; "Ch. Gl. cialancensis n. sp. ♂ det. NADIG" [printed on white paper]; "Holo-Typus" [printed on red card with "Holo-" typed]. Specimen set with right wings spread and left wings folded. The last tarsal segment of the right front leg is missing. The right hind leg is glued to a card mount with "Z: 157" handwritten on it and secured on the original pin. There are 14 ♀ paratypes and 20 ♂ paratypes, one labelled as allotype, also present. According to the original description a pair of paratypes was deposited in the collections of both Kurt Harz and Fer Willemse. The pair in the Harz collection is in the MHNG, the pair in the Willemse collection is in the RMNH. Boxes Nadig 814 & Harz 132b.

Chorthippus cialancensis Nadig, 1986

cockerelli timhaditensis Nadig, 1976a: 343-344 [*Uromenus*].

Maroc, Moyen Atlas, Timhadite. ♂ Holotype, 29 ♂ paratypes and 15 ♀ paratypes.

♂ Holotype with labels: "MAROC 70 MA 70: 91, Moyen Atlas Central, N-Teil: 2000 m, 8 km N Timhadite, 20.-22.7.70, leg. Nadig" [printed on white card with "91" and "2000 m, 8 km N Timhadite" handwritten by Nadig]; "St. cockerelli timhaditensis ssp. n. Nadig ♂ det. Nadig" [typed on white card with "♂" added by hand in red ink and "det. Nadig" printed]; "Type Holo-" [handwritten in red ink on white card with red printed border with "Type" printed in red]. Most of the left antenna is missing. Dissected genitalia are glued to a card mount secured on the original pin. There are 27 ♂ paratypes, 14 ♀ paratypes, one labelled as allotype, and four immature ♀ which are also labelled as paratypes but not mentioned in the original description. According to the description a pair of paratypes is in the ISCM. Box Nadig 262.

Uromenus cockerelli timhaditensis Nadig, 1976

decipiens insubrica Nadig, 1980a: 148-150 [*Odontopodisma*].

Meride (TI). ♂ Holotype, 6 ♂ paratypes and 6 ♀ paratypes.

♂ Holotype with labels: "Meride (TI.) "Camponaria", 16.VII.60, 600 m, leg. Nadig" [handwritten on white card with "Nadig" printed]; "O. decipiens insubrica NADIG ♂ det. NADIG" [typed on white card with "♂" added by hand and "det. NADIG" printed]; "HOLO-Typus" [printed on red card with "Holo-" typed]. There are

six ♂ paratypes and six ♀ paratypes, one of them labelled as allotype, also present. Although the list of material studied was very extensive and includes many stations in Italy, the type series was explicitly restricted to the specimens from Meride in the Swiss canton of Ticino. Box Nadig 449.

Odontopodisma decipiens insubrica Nadig, 1980

formosanta bessae Nadig, 1989b: 213-215 [*Miramella*].

Italien, Piemonte, La Bessa. ♂ Holotype, 9 ♂ paratypes and 13 ♀ paratypes.

♂ Holotype with labels: "I Piemonte 84: 71 La Bessae (S. Biella), 250-300 m, 11.9.84 leg. Nadig" [printed on white card]; "84: 71 No. 1 (♂), Zeichn. Penisva." [typed on yellow paper]; "Mi. formos. bessae ssp. n. Nadig ♂ det. NADIG" [printed on white card with "♂" added by hand]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. Specimen set with wings folded. There are 10 ♀ and 15 ♀ specimens with data corresponding to the original description labelled as paratypes (one ♀ labelled as allotype). It is not clear whether the number given in the description was erroneous or whether some of these individuals were identified later and are therefore not part of the type series. This subspecies is not included in OSF. Box Nadig 411.

Nadigella formosanta bessae (Nadig, 1989)

galvagnii Nadig, 1994: 1000-1002 [*Uromenus*].

Marokko, Rif, Chéchaouen. ♂ Holotype, 4 ♂ paratypes, 4 ♀ paratypes and 5 immature paratypes.

♂ Holotype with labels: "Maroc 68 MA 68: 12 Chéchaouen, 250 m, 19.6.68, leg. Nadig" [printed on white card with "12" and "250 m 19." handwritten by Nadig]; "Urom. tuberculatus sp. nova NADIG ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "U. galvagnii sp. n. ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. The left antenna, the tarsi of the left middle leg and the entire right middle and hind legs are missing. There are four ♂ paratypes, four ♀ paratypes, one labelled as allotype, and five immature paratypes (one of which is not labelled as such) also present. Images on OSF. Box Nadig 252.

Uromenus galvagnii Nadig, 1994

gracilis Nadig, 1981b: 628-631 [*Uromenus*].

Tunisien, Majoura. ♂ Holotype, 2 ♂ paratypes and 5 ♀ paratypes.

♂ Holotype with labels: "TUNISIA TU.77 : 31 Majoura (E Gafsa), Hügelzone, 500m, 7.6.77, leg. NADIG" [printed on white card]; "U. (St.) gracilis sp. n. ♂ det. NADIG" [typed on white card with "♂" added by hand and "det. NADIG" printed]; "TU.77: 31 Steropl. spec. No. 5 MIKROPHOTO 1977/VII: .19" [typed on squared paper with "MIKROPHOTO 1977/VII : " in red and ".19" added by hand in red ink]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. The last tarsal segment of the left middle leg and the claws of the right hind leg are missing. Dissected genitalia are glued to a card mount secured on the original pin. There are two ♂ paratypes and five ♀ paratypes, one labelled as allotype also present. A sixth ♀ has a paratype label

but is not designated as such in the original description. Images on OSF. Box Nadig 254.

Parasteropleurus gracilis (Nadig, 1981)

harzi Nadig, 1988: 109-112 [*Omocestus*].

Maroc, Maor, J. Bou Iblane. ♂ Holotype, 8 ♂ paratypes and 10 ♀ paratypes.

♂ Holotype with labels: "Maroc 68 MA 68: 45, Taffert SW-Grat J. Bou Iblane, 2200-2550 m, 4./5.7.68 leg. Nadig" [printed on white card with "45, Taffert SW-Grat J. Bou Iblane, 2200-2550 m, 4./5.7." handwritten by Nadig]; "No. 5" [typed on a strip of yellow paper]; "O. harzi sp. n. NADIG, 1988 det. Nadig" [typed on white card with "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. Specimen set with wings folded. The right hind leg is glued to a card mount with "1" (in red) and "Z: 25!" (in black) handwritten on it and secured on the original pin. There are eight ♂ and nine ♀ paratypes, one labelled as allotype, also present. The ♀ paratype stated to be in Harz's collection in the original description could not be found in the MHNG. Box Nadig 673.

Omocestus harzi Nadig, 1988

keisti Nadig, 1989a: 80-83 [*Chrysochaon*].

Schweiz, St. Gallen, Toggenburg. ♂ Holotype, 6 ♂ paratypes and 12 ♀ paratypes.

♂ Holotype with labels: "CH: Churfürsten 88: 46 Gamserrugg, 1800-1900 m, 10.9.88, leg. Nadig" [typed on white card with "det. Nadig" printed]; "No 2" [handwritten on a strip of yellow paper]; "46" [handwritten on green paper]; "Podismopsis keisti sp. n. det. Nadig" [typed on white card with "det. Nadig" printed]; "Holo-Typus" [printed on red card with "Holo-" handwritten]. Specimen set with right forewing spread and left forewing folded. There are six ♂ paratypes and 12 ♀ paratypes, one labelled as allotype, also present. Box Nadig 653.

Podismopsis keisti (Nadig, 1989)

littoralis insubrica Nadig, 1961: 275-278 [*Pholidoptera*].

Meride bei "Campagna" (TI). ♂ Holotype, 38 ♂ paratypes and 95 ♀ paratypes.

♂ Holotype with labels: "Meridie (TI): "Campagna" [sic], 16.VII.60, 600 m, leg. Nadig" [handwritten by Nadig on white card with "Nadig" printed; the spelling of Meride is corrected in blue ink]; "Pholidoptera littoralis insubrica Nadig HOLOTYPE" [handwritten by Nadig on red card]; "Type" [printed on white card with printed red border]. A card mount with dissected genitalia glued to it is pinned in the insect box near the holotype and presumably belongs to it. The paratypes from the type locality are labelled as such, but the others are not; there 23 ♂ and 65 ♀ from the other localities mentioned in the original description also present. A pair of paratypes from the type locality is absent. Images on OSF. Box Nadig 156.

Pholidoptera littoralis insubrica Nadig, 1961

melillae Nadig, 1994: 980-982 [*Uromenus*].

Marokko, Melilla, Oued Kert. ♂ Holotype, 4 ♂ paratypes and 1 ♀ paratype.

♂ Holotype with labels: "Maroc 70 MA 70: 68, Oued Kert, SW Nador, 100-200 m, 10.7.70, leg. Nadig" [printed on white card with "68, Oued Kert, SW Nador 100-200 m 10.7." handwritten by Nadig]; "MA 70 : 68 No. 1 (♂), Abd. Ende u. Titillat." [typed on orange card with "♂" added by hand]; "U. melillae sp. n. ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" handwritten]. The right antenna, the tibia and tarsi of the left front leg, the tarsi of the right front leg and most of the tibia and the tarsi of the left middle leg are missing. Dissected genitalia are glued to a card mount secured on the original pin. The four ♂ paratypes and the ♀ paratype, labelled as allotype, are also present. Three ♂ from another locality (mentioned as "Weitere Exemplare" in the original description) have been erroneously labelled as paratypes. Images on OSF. Box Nadig 250.

Uromenus melillae Nadig, 1994

moulouyae Nadig, 1995: 138-142 [*Steropleurus*].

Maroc, Haute Moulouya. ♂ Holotype, 54 ♂ paratypes and 51 ♀ paratypes.

♂ Holotype with labels: "Maroc 68 MA 68: 57, Ob. Moulouya (S Zeida), 1450 m, 12.7.68, leg. Nadig" [handwritten by Nadig on white card with "Maroc 68 MA 68:" and "68 leg. Nadig" printed]; "MA 68 : 57 No. 6" [typed on a strip of white card]; "moulou, moulouyae sp. n. NADIG, 1995 ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. The right antenna, most of the left antenna and the tarsi of the left hind leg are missing. There are 53 ♂ paratypes and 50 ♀ paratypes, one labelled as allotype, also present in the collection. Images on OSF. Boxes Nadig 256 and 257.

Uromenus moulouyae moulouyae (Nadig, 1995)

moulouyae oumerrbiae Nadig, 1995: 143-144 [*Steropleurus*].

Maroc, zwischen Moulouya und Oued Serrou. ♂ Holotype, 6 ♂ paratypes and 1 ♀ paratype.

♂ Holotype with labels: "MAROC 70 MA 70: 130, Moyen Oum-Er-Rbia: Azrou-n-Âit-Lancem, 1720-1830 m, 29.7.-2.8.70, leg. Nadig" [printed on white card with "130" and "Azrou-n-Âit-Lancem 1720-1830 m" handwritten by Nadig]; "MIKROPH/ 1978: III: 19-23 ? N° 1" [typed in red ink on squared white card with "? No 1" handwritten]; "moulouyae oumerrbiae ssp. n. NADIG, 1995 ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. There are dissected parts glued to a card mount secured on the original pin. The six ♂ paratypes and one ♀ paratype, labelled as allotype, are also present. Images on OSF. Box Nadig 257.

Uromenus moulouyae oumerrbiae (Nadig, 1995)

nerii pictus Nadig, 1981b: 625-628 [*Uromenus*].

Haffouz, W Kairouan. ♂ Holotype, 3 ♂ paratypes, 6 ♀ paratypes and 1 immature paratype.

♂ Holotype with labels: "TUNISIA TU.77: 39 Haffouz, W Kairouan, 320 m, 11.6.77, leg. NADIG" [printed on white card]; "TU.77: 39 Steropl. spec. ♂ N° 1

MIKROPHOTO 1977/VII: No. 32,33,34" [typed on squared paper with "♂ No 1" handwritten in pencil and "1MIKROPHOTO 1977/VII: No. 32,33,34" in red]; "HOLO-Typus" [printed on red card with "HOLO-" typed] ["Long. Corp.: 33, pron.: 9.5, fe.po.: 20, ovip.: -" [printed on white paper with numerals added by hand in pencil]. The left antenna, two tarsal segments of the right front leg, two tarsal segments of the left hind leg and the last tarsal segment of the right hind leg are missing. Dissected genitalia are glued to a card mount secured on the original pin. Three ♂ paratypes, six ♀ paratypes, one labelled as allotype, and one immature ♀ paratype are also present. Images on OSF. Box Nadig 253.

Parasteropleurus nerii pictus (Nadig, 1981)

pedestris apuanus Nadig, 1958: 31-37 [*Antaxius*].

Apuan Alps, Capriglia; Arni; Passo del Vestito. 6 ♂ syntypes, 6 ♀ syntypes and 1 immature syntype.

Nadig did not designate a holotype in the original description, referring to "Typen" and "Paratypen", and so the type series must be considered syntypes. A ♂ syntype with labels: "P. vestito, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with "P. vestito" typed]; "Antax. pedestris apuana ssp. n. ♂ det. Nadig" [typed on white card, with "ssp. n." in red, "♂" added by hand and "det. Nadig" printed]; "Syntypus" [printed on red paper]. Most of the left antenna has been broken off and is glued to the determination label. A ♂ syntype with labels: "Capriglia, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with "Capriglia" handwritten]; "Antax. pedestris apuana ssp. n. ♂ det. Nadig" [typed in red on white card with "♂" added by hand and "det. Nadig" printed]; "Syntypus" [printed on red paper]. A ♂ syntype with labels: "Arni, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with "Arni" handwritten]; "Antax. pedestris apuana ssp. n. ♂ det. Nadig" [typed in red on white card with "♂" added by hand and "det. Nadig" printed]; "Syntypus" [printed on red paper]. Most of the left antenna is lost. A ♂ syntype with labels: "Capriglia, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with "Capriglia" handwritten]; "Präp. 1957, Nr. 4, Antax. ped. apuana ssp. nova ♂" [typed in red on pink paper with "ssp. nova ♂" added by hand and "Präp. 19" and "Nr." printed]; "Syntypus" [printed on red paper]. The claws of the left middle and right hind legs are missing. A ♂ syntype with labels: "Capriglia, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with "Capriglia" handwritten]; "Präp. 1957, Nr. 1, Ant. pedestris apuana ssp. n. ♂" [typed on pink paper with "♂" added by hand and "Präp. 19" and "Nr." printed]; "Syntypus" [printed on red paper]. The claws of the right front leg and the end of the abdomen are missing. A ♀ syntype with labels: "Arni, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with "Arni" handwritten]; "Antax. pedestris apuana ssp. n. ♀ det. Nadig" [typed in red on white card with "♀" added by hand and "det. Nadig" printed]; "Syntypus" [printed on red paper]. Most of the right antenna has been broken off and is glued to the determination label. A ♀ syntype with labels: "Capriglia, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with "Capriglia" handwritten]; "Antax. pedestris apuana ssp. n. ♀ det. Nadig" [typed in red on white card with "♀" added by hand and "det. Nadig" printed]; "Syntypus" [printed on red paper]. The left antenna is missing. A ♀ syntype with labels: "Capriglia, Aug. 1957, Pisa-Masse (Nadig)" [printed on white card with

“Capriglia” handwritten]; “*Antax. pedestris apuana* ssp. n. ♀ det. Nadig” [typed in red on white card with “♀” added by hand and “det. Nadig” printed]; “*Syntypus*” [printed on red paper]. A ♀ syntype with labels: “Arni, Aug. 1957, Pisa-Masse (Nadig)” [printed on white card with “Arni” handwritten]; “*Antax. pedestris apuana* ssp. n. ♀ det. Nadig” [typed in red on white card with “♀” added by hand and “det. Nadig” printed]; “*Syntypus*” [printed on red paper]. Most of the right antenna, the tarsi of the right middle leg and the entire right hind leg are lost. A ♀ syntype with labels: “Capriglia, Aug. 1957, Pisa-Masse (Nadig)” [printed on white card with “Capriglia” handwritten]; “Ant. ped. ?” [typed on a strip of white paper]; “*Antax. pedestris apuana* ssp. n. ♀ det. Nadig” [typed in red on white card with “♀” added by hand and “det. Nadig” printed]; “*Syntypus*” [printed on red paper]. There are two juvenile ♀ specimens collected in 1956 but without precise localities one of which could be the immature syntype mentioned in the original description; Coray (2004) includes both in the type series. The original description states that a pair of syntypes was deposited in the MCSN. The date of the publication is given as 1959 on OSF. Images on OSF. Box Nadig 196.

Antaxius pedestris apuanus Nadig, 1958

sampeyrensis Nadig, 1986: 224-227 [*Chorthippus*].

Italien, Cle. di Sampeyre. ♂ Holotype, 17 ♂ paratypes and 22 ♀ paratypes.

♂ Holotype with labels: “I: Piemonte 85: 62 Cle. di Sampeyre, Passhöhe, 2280-2300 m, 31.8.85, leg. NADIG” [printed on white card]; “85: 62 No. 2 (♂) Messungen” [typed on yellow paper with “♂” added by hand]; “Ch. Gl. sampeyrensis n. sp. NADIG ♂ det. NADIG” [printed on white paper]; “Holo-Typus” [printed on red card with “HOLO-” typed]. Specimen set with right forewing spread and left forewing folded. The right hind leg is glued to a card mount with “Z: 108?” handwritten on it and secured on the original pin. There are 12 ♂ and 17 ♀ paratypes, one labelled as allotype, also present. According to the original description a pair of paratypes was deposited in the collections of both Kurt Harz and Fer Willemse; those in the Harz collection are in the MHNG, those in the Willemse collection are in the RMNH. Boxes Nadig 814 and Harz 132b.

Chorthippus sampeyrensis Nadig, 1986

sardous Nadig & Nadig, 1934: 18-19 [*Euchortippus* (sic)].

Sardinien, Gennargentu. ♂ Holotype, 1 ♂ paratype.

♂ Holotype with labels: “Gennargentu, Sard., 17.7.30, 1900, Ad. Nadig” [printed on white card with “1900” added by hand]; “*Euchort. sardous* n. sp. Nadig det. Nadig” [handwritten by Nadig with “det. Nadig” printed]; “HOLO-Typus” [printed on red card with “HOLO-” typed]. Specimen set with left wings spread and right wings folded. The right antenna, left front leg, right middle leg and the tarsi of the right hind leg are lost. The ♂ paratype is also present. Box Nadig 825.

Euchorthippus sardous Nadig, 1934

silviae Nadig, 1979a: 146-149 [*Uromenus*].

Maroc, J. Bou Iblane. ♂ Holotype, 6 ♂ paratypes, 3 ♀ paratypes and 2 immature paratypes.

♂ Holotype with labels: "MAROC 70 MA 70: 85, Moyen Atlas Nord-Est, J. Bou Iblane, 2000-2500 m, S-Hang, 17./18.7.1970, leg. Nadig" [printed on white card with "85" and "2000-2500 m S-Hang" handwritten]; "U. (U.) silviae n. sp. NADIG ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. Dissected genitalia are glued to a card mount secured on the original pin. There are five ♂ paratypes, three ♀ paratypes, one labelled as allotype, and three immature paratypes present (presumably the most developed was counted with the males in the original description). The specimens from Tamtroucht mentioned in the original description are also in the MHNG. Images on OSF. Box Nadig 248.

Uromenus silviae Nadig, 1979

stigmaticus ketamensis Nadig, 1979b: 399-402 [*Stenobothrus*].

Maroc, Rif, Ebene von Ketama. ♂ Holotype, 116 ♂ paratypes and 95 ♀ paratypes.

♂ Holotype with labels: "MAROC 70 MA 70: 81 Ketama, 1500 m, 14/15.7.70, leg. Nadig" [printed on white card with "81 Ketama 1500 m 14/15.7." handwritten by Nadig]; "S. stigma. ketamensis NAD. ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]; "39 1,1 36 1: 42 1,16 48 1,3" [handwritten in pencil on squared paper]; "MIKROPHOTO : 71/III. 21-25, 71/V. 21-24" [typed in red on squared paper]. There is a further piece of squared paper with a sketched diagram and some figures. The left antenna, the last tarsal segment of the left front leg, the tarsi of the right front leg and the entire right hind leg are missing. There are 116 ♂ paratypes and 91 ♀ paratypes, one labelled as allotype, also present. Box Nadig 721.

Stenobothrus stigmaticus ketamensis Nadig, 1979

terrestris caprai Nadig, 1980b: 488-494 [*Ephippiger*].

Italien, San Remo, Mte. Bignone. ♂ Holotype, 17 ♂ paratypes, 11 ♀ paratypes and 2 immature paratypes.

♂ Holotype with labels: "I. San Remo 77 : 29, Mte. Bignone, 1100-1299 m, 19.8.77, leg. NADIG" [printed on white card]; "77 : 29 No. 1 ♂" [typed on a strip of white card with "♂" added by hand]; "E. caprai n. sp. ♂ det. NADIG" [typed on white card with "♂" added by hand and "det. NADIG" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. Most of the right antenna and the claws of the right front leg are missing. Dissected genitalia are glued to a card mount supported on the original pin. There are 16 ♂ paratypes, 10 ♀ paratypes, one labelled as allotype, and two immature paratypes also present. Images on OSF. Box Nadig 230.

Ephippiger terrestris caprai Nadig, 1980

tobboganensis Nadig, 1994: 984-988 [*Uromenus*].

Marokko, Tobbogan. ♂ Holotype, 9 ♂ paratypes and 6 ♀ paratypes.

♂ Holotype with labels: "Maroc 68 MA 68: 35, Tobbogan, 1000 m, 1.7.68, leg. Nadig" [printed on white card with "35, Tobbogan 1000m, 1.7." handwritten by Nadig]; "MIKROPH. Abd. -Ende, Titill./Pron. v. oben N° 1 (♂)" [typed on yellow

paper with "N° 1 (♂)" handwritten]; "U. tobogganensis sp. n. ♂ det. Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" handwritten]. The left front leg is missing. Dissected genitalia and the tarsi of the right hind leg are glued to a card mount secured on the original pin. The nine ♂ and six ♀ paratypes are also present. Images on OSF. Box Nadig 250.

Uromenus tobogganensis Nadig, 1994

ursulae Nadig, 1986: 214-217 [*Stenobothrus*].

Italien, Canavese, St. Elisabetta. ♂ Holotype, 25 ♂ paratypes and 38 ♀ paratypes.

♂ Holotype with labels: "I: Piemonte: 85: 37, Canavese: St. Elisabetta, 1350 m, 25.8.85, leg. Nadig" [printed on white card]; "St. ursulae n. sp. ♂ det. NADIG" [printed on white card with "♂" added by hand]; "Holo-Typus" [printed on red card with "Holo-" typed]. Specimen set with right wings spread and left wings folded. The claws of the left hind leg are missing. There are 21 ♂ paratypes and 34 ♀ paratypes, one labelled as allotype, also present. According to the original description a pair of paratypes was deposited in the collections of Kurt Harz and Fer Willemse; the pair in the Harz collection could not be found in the MHNG, that in the Willemse collection is in the RMNH. Box Nadig 706.

Stenobothrus ursulae Nadig, 1986

vagans africanus Nadig, 1981a: 188-192 [*Chorthippus*].

Algerie, Grande Kabylie, Col Talmetz. ♂ Holotype, 17 ♂ paratypes and 21 ♀ paratypes.

♂ Holotype with labels: "Algerie ALG. 79: 63, Grande Kabylie: Col Talmetz, 1000 m, 18.7.79, leg. NADIG" [printed on white card]; "No. 3 (♂)" [typed on a strip of yellow paper with "♂" added by hand]; "Gl. vagans africanus ssp. n. NADIG ♂ det. Nadig" [photocopy on white paper]; "MIKROPHOTO 80/III, No. 8-11, 81/I No. 0-4" [typed in red on a strip of white card]; "Holo-Typus" [printed on red card with "Holo-" typed]. There is also a piece of card with various sketches and measurements on the pin. Specimen set with right wings spread and left wings folded. The right hind leg is glued to a card mount secured on the original pin. There are 15 ♂ paratypes and 15 ♀ paratypes, one labelled as allotype, also present. Labels in the insect box indicate that some paratypes were sent to Fer Willemse, whose collection is now in the RMNH. Box Nadig 809.

Chorthippus vagans africanus Nadig, 1981

vindti midelti Nadig, 1995: 148-150 [*Steropleurus*].

Maroc, Haute Moulouya, Midelt. ♂ Holotype, 9 ♂ paratypes and 7 ♀ paratypes.

♂ Holotype with labels: "MAROC 70 MA 70: 52, Haute Moulouya: MIDELE, Fuss Tizi-n-Talrhemt, 1700 m, 3.7.70, leg. Nadig" [printed on white card with "52" and "MIDELE, Fuss Tizi-n-Talrhemt, 1700 m 3" handwritten by Nadig]; "MA 70 : 52 Nr. 1" [typed on a strip of white card]; "U. (ST.) vindti midelti ssp. n. NADIG ♂ det.

Nadig" [typed on white card with "♂" added by hand and "det. Nadig" printed]; "HOLO-Typus" [printed on red card with "HOLO-" typed]. The claws of the left hind leg are missing. There are dissected parts glued to a card mount secured on the original pin. The nine ♂ paratypes and seven ♀ paratypes, one labelled as allotype, are also present. Images on OSF. Box Nadig 258.

Uromenus vindti midelti (Nadig, 1995)

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